



Air & Space Command & Control Agency (ASC2A)

**This Briefing is
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Chief, Global Grid Division
ASC2A/C2G DSN 574-5333**

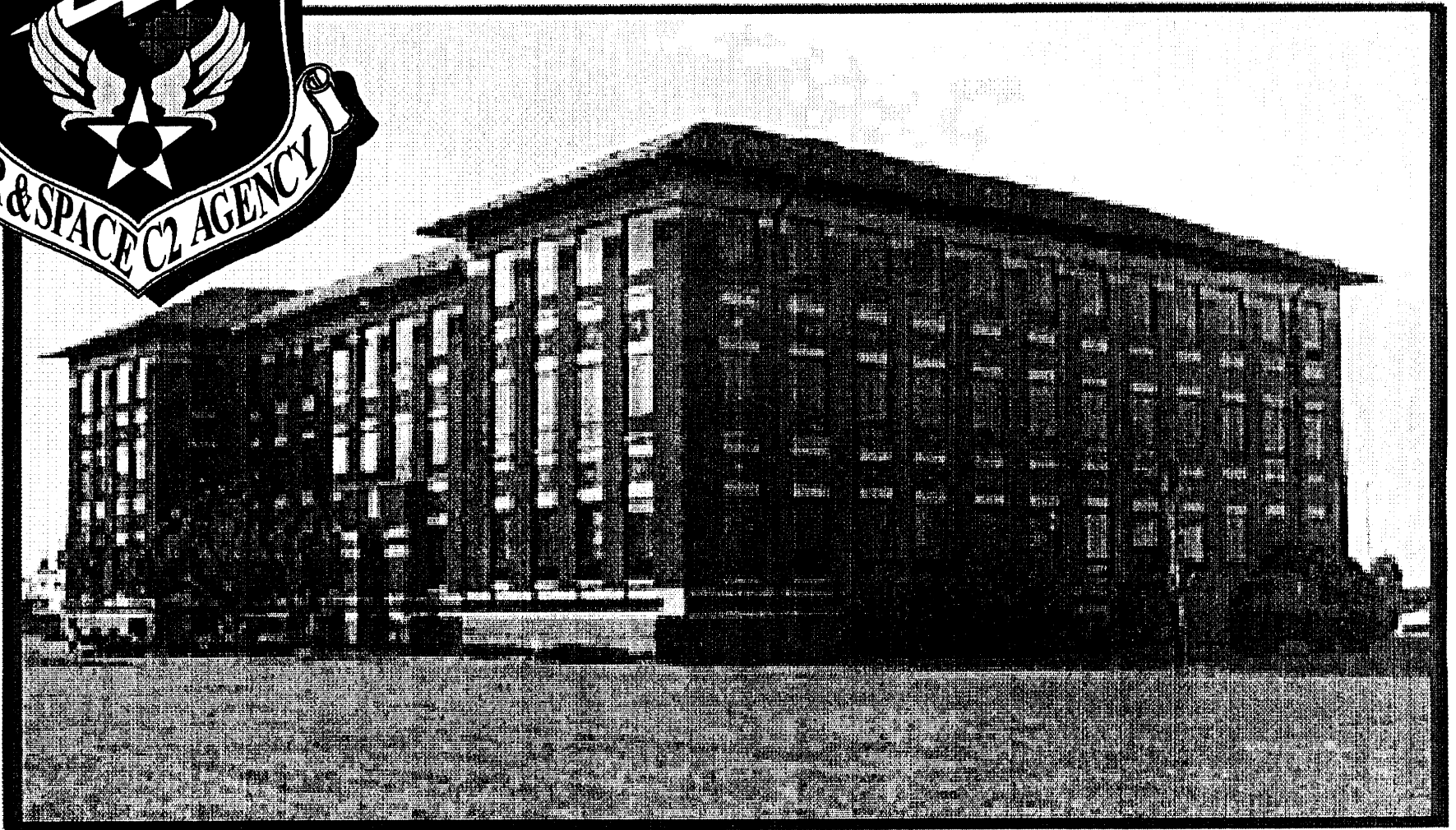
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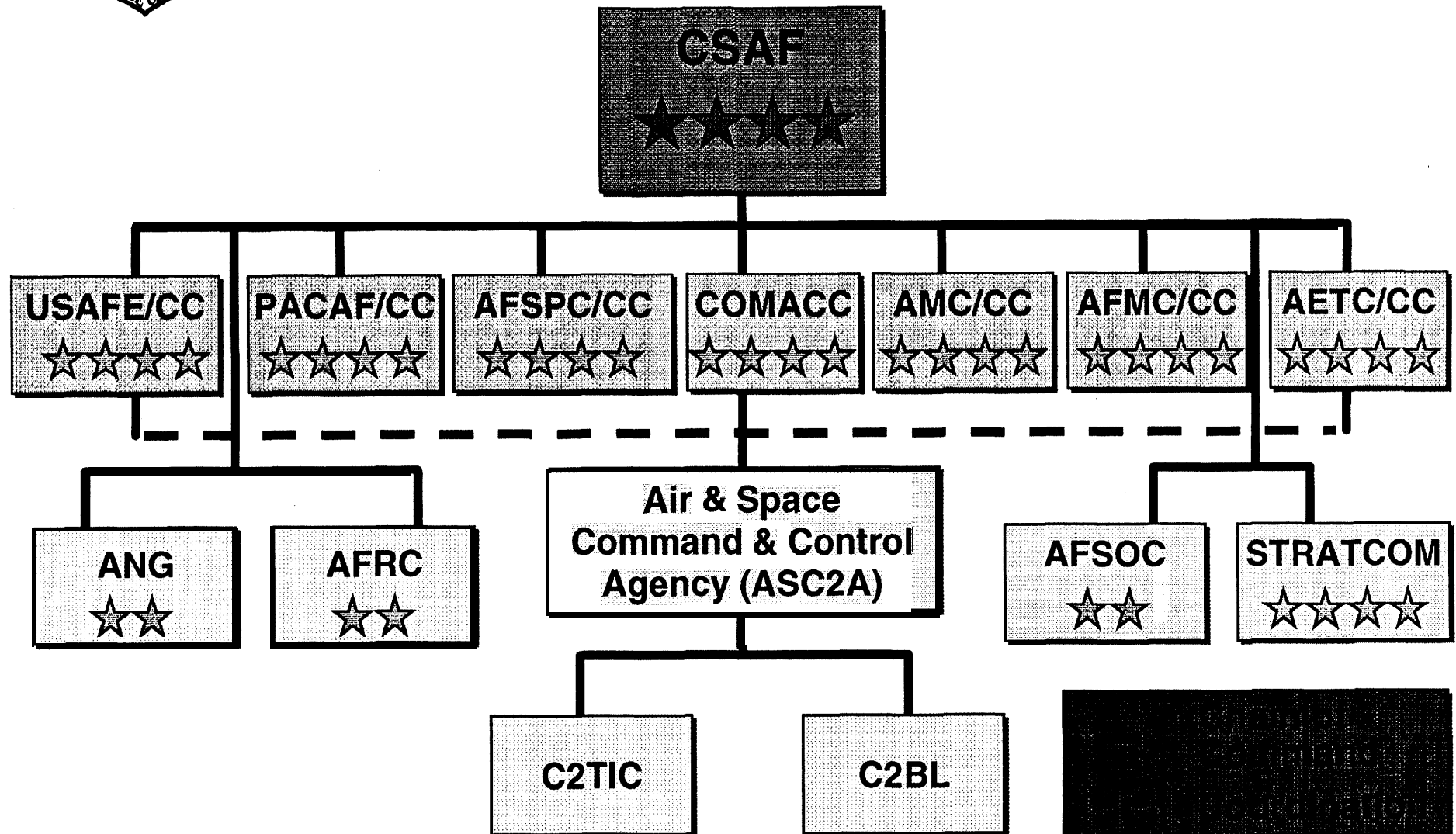
ASC2A Headquarters



Langley Air Force Base, Virginia



Command Relationships



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ASC2A Headquarters Staff

Liaison
Mr Britton

Technical Director
Mr Barringer

CC/CV
MGen Hawley
Command Section
Col Webber

ASC2A Field Agency(s)
Col Lindsley
Col Carpenter

Plans & Programs Integration
Col Ranne

Force Development & Experiments
Col Mc Crabb
Col M Brooks

Combat Air & Space Forces

Col Menden

Global Mobility Forces

Col Duan

Nuclear Forces

Col Blackburn

Information Operations Forces

Col Stevens

Agile Combat Spt Forces

Col Meyer

Special Operations

Col Huinker

Constructive Competition Matrix

C2 Centers & Applications
Col Junge

Data Fusion & Common Picture
Col Wallace

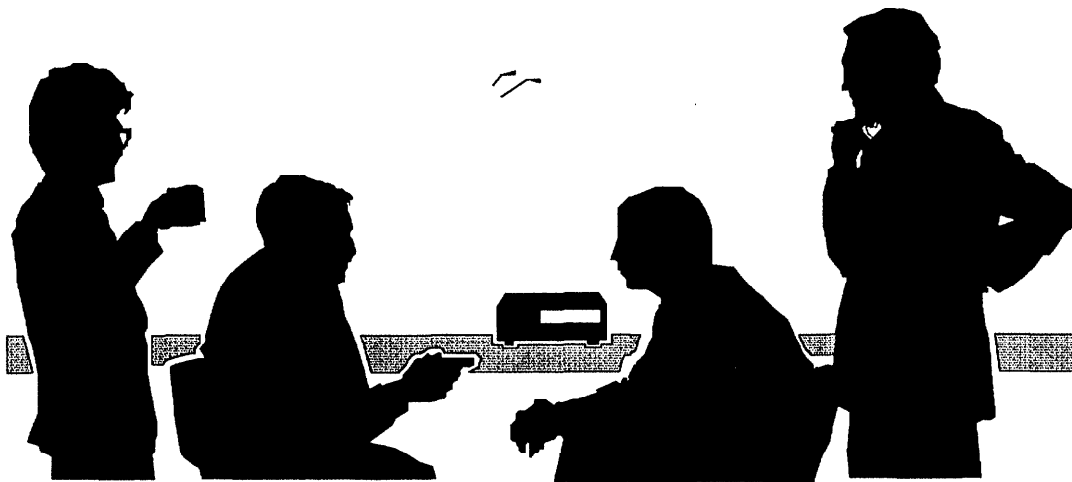
Global Grid & Infrastructure
Col Fellows

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Establishment of ASC2A

CSAF Convened a 4-star C2 Summit



Conclusion...

C2 in the Air Force is **broken!**

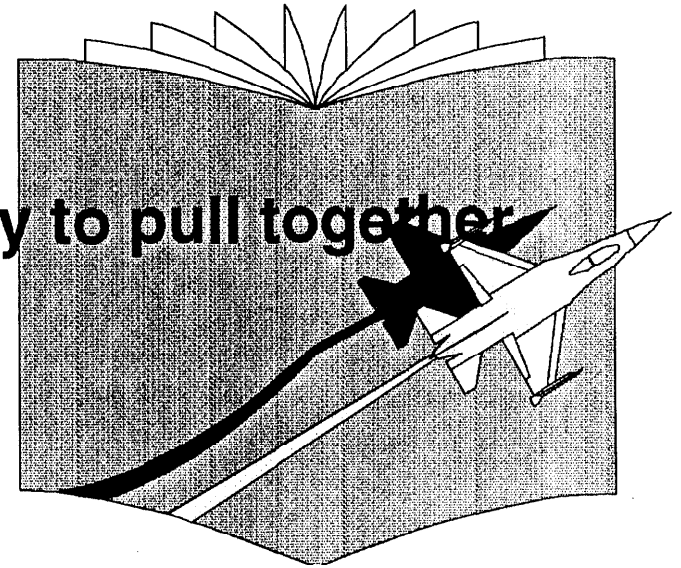


Mission

The ASC2A serves as the lead agency to pull together C2 across the Air Force.

Primary tasks are to:

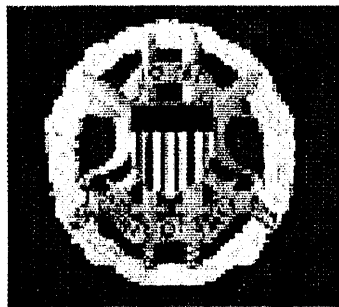
- Develop a C2 roadmap**
- Integrate air & space C2**
- Eliminate duplication of effort**





Common C2 Objective Guidance

- Joint Vision 2010: Full Spectrum Dominance



“Information superiority will provide a commander with enhanced awareness in his area of responsibility whether his objective is to [perform] peacetime engagement, deterrence and conflict prevention, and/or fight and win”

- Global Engagement



“Providing Full Spectrum Dominance requires a truly interactive common battlespace picture. The Air Force is committed to providing the integrated global and theater air, space, and surface picture of the battlespace to the 21st century joint force commander”

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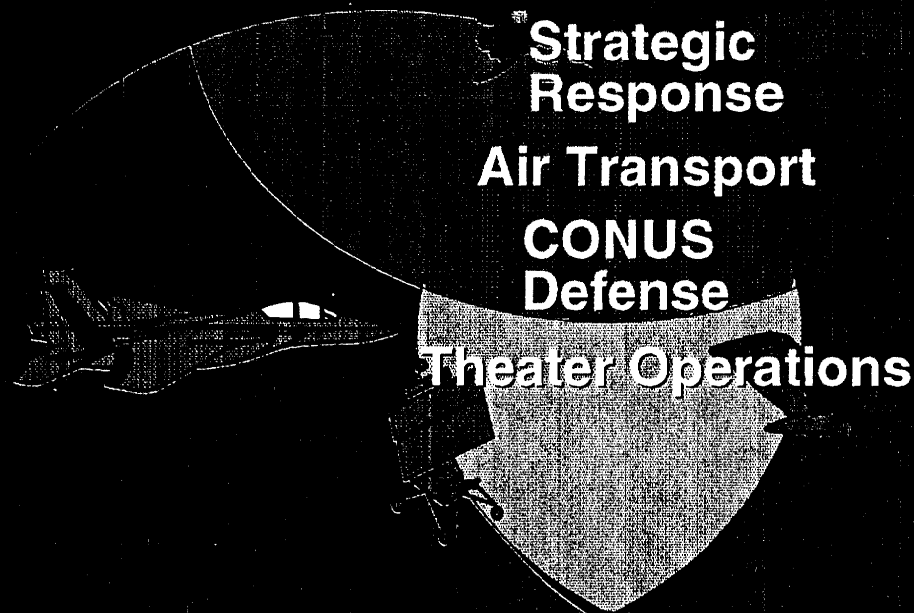


AF Roles & Missions (1946 - 1948)

CONUS Air Defense
Strategic Air Warfare
Air Transport
Air Superiority
Close Support

C2 Force Today

**70 - 90%
Common
Functions**

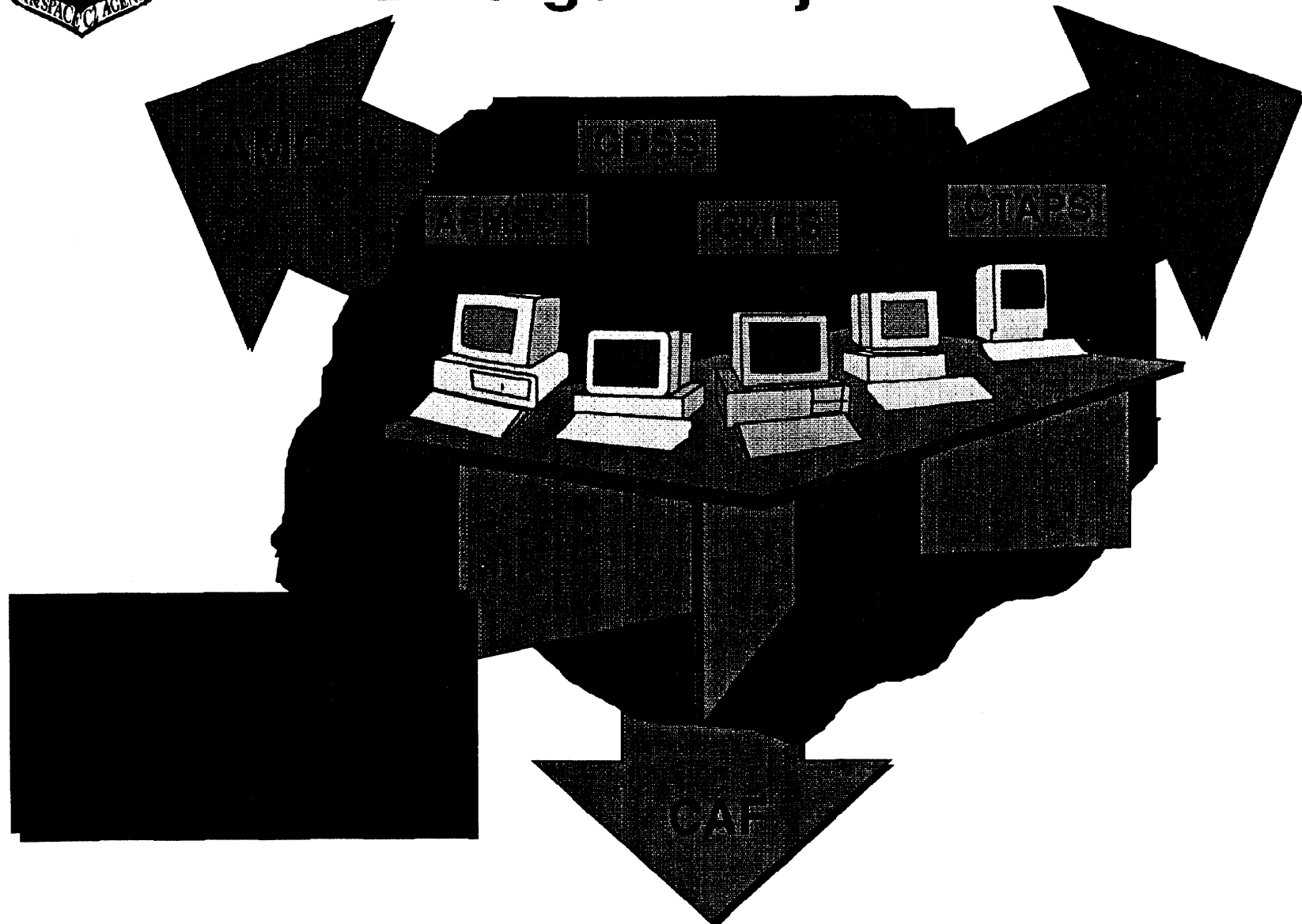


Display Threat
Disseminate Execute Orders
Breakout Ops Plans and tasks
Schedule and Assign Assets

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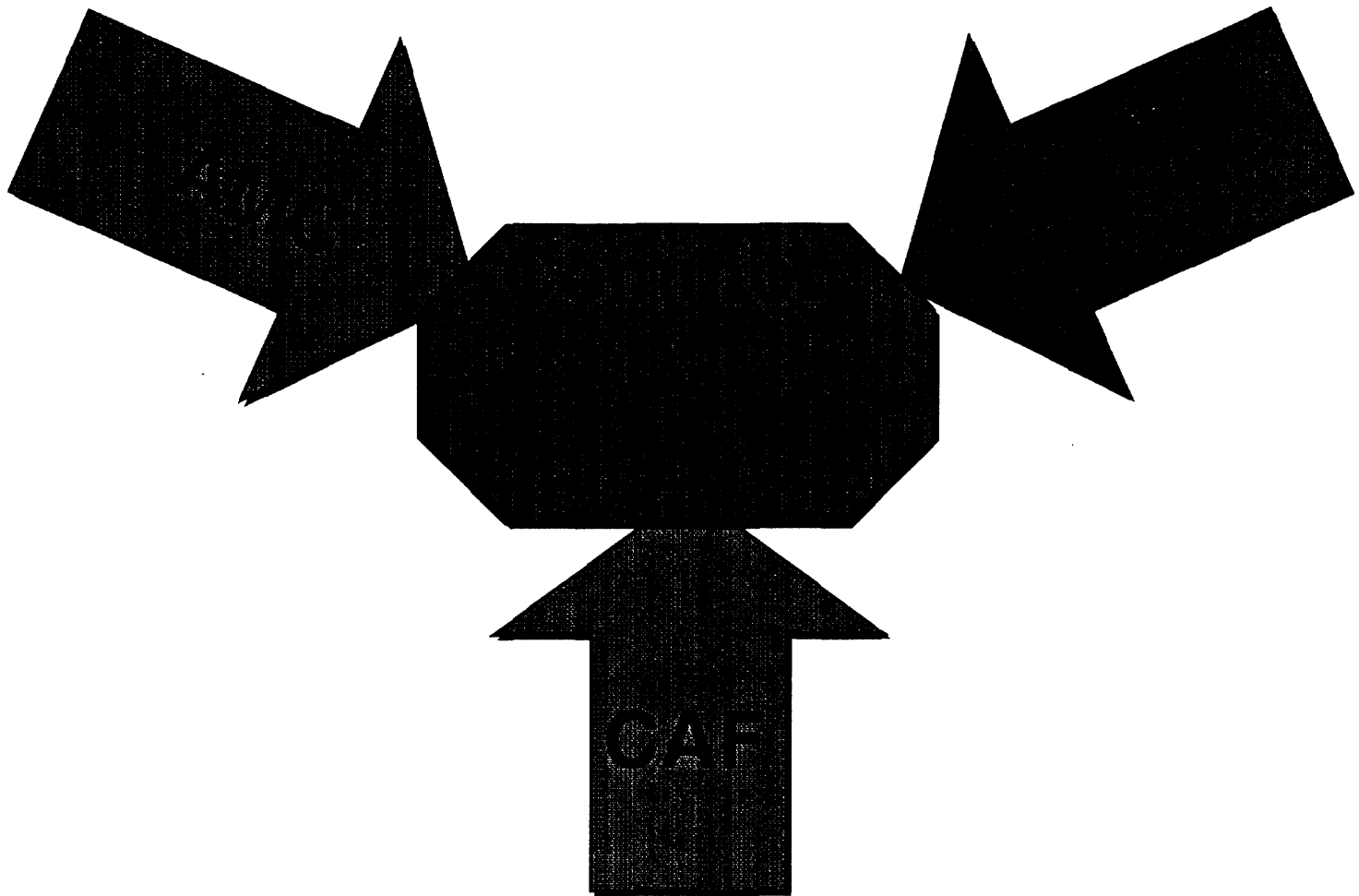


C2 Systems Reflect Divergent Objectives





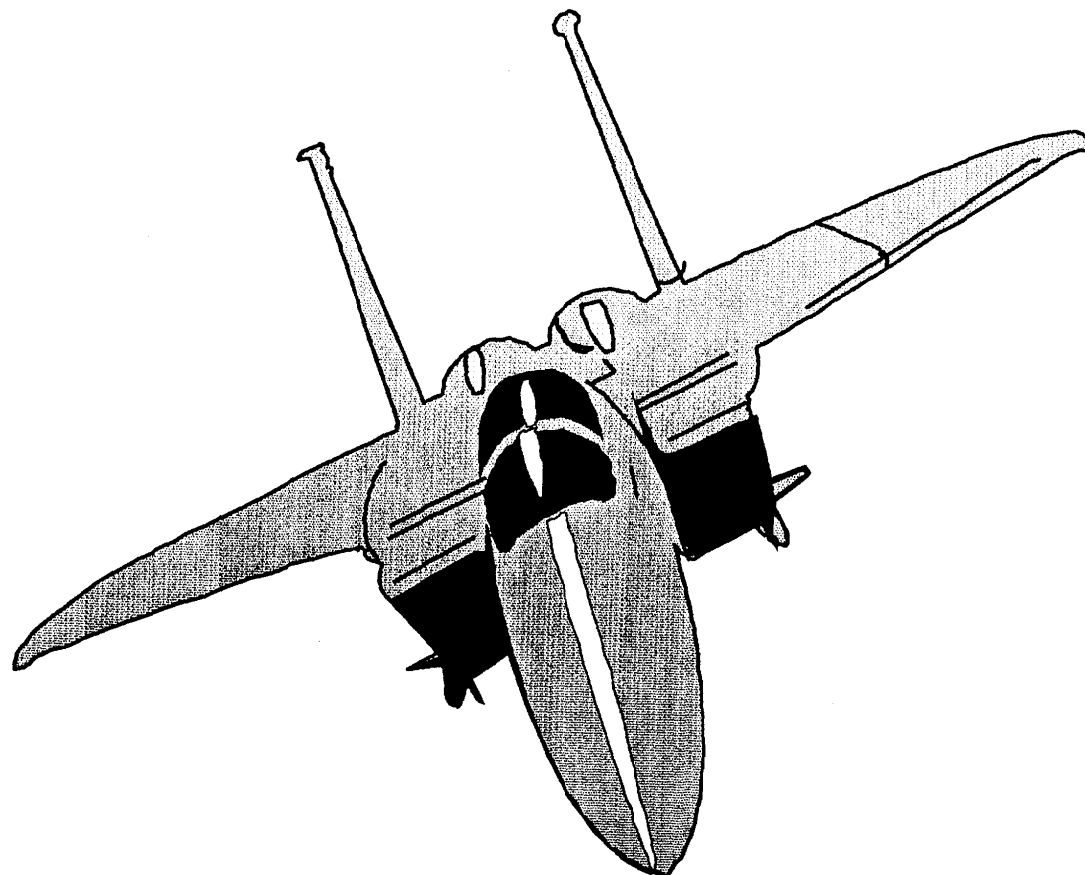
A Lack of Common C2 Objective(s)





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C2 as a *Weapons System*



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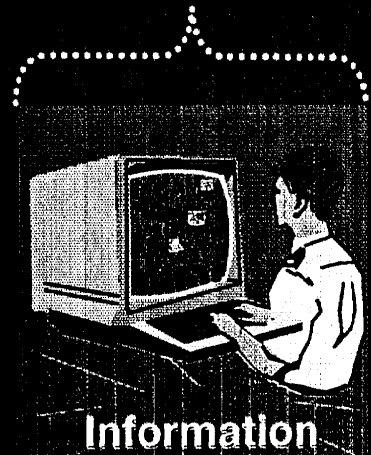
Information as a Weapon

Technology
of
Information

On Information and Future Conflicts...

- the battle is not waged where the soldiers are, necessarily, or where the front lines are; the battle may be waged a thousand miles behind that.

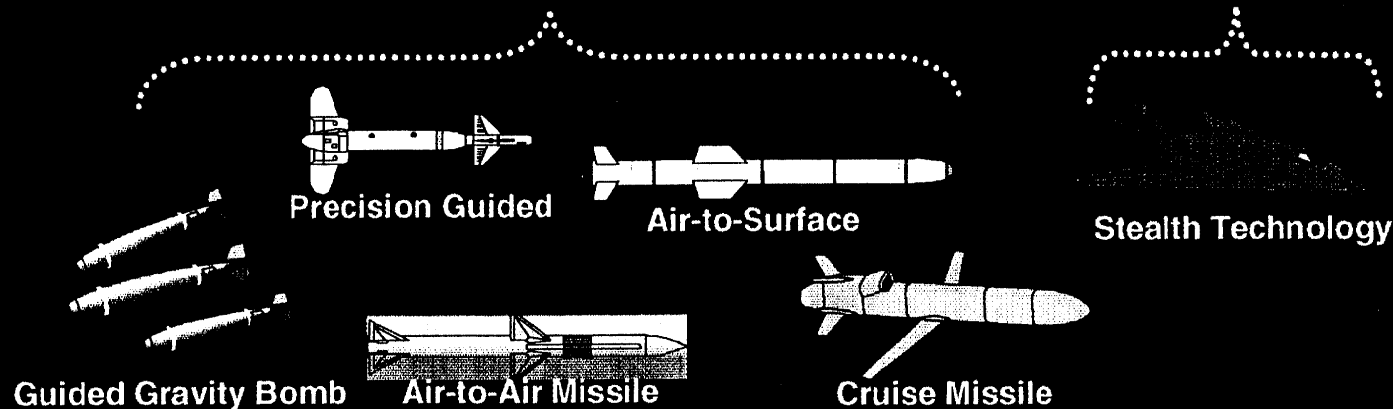
- Alvin Toffler Author "Future Shock"



Information

Technology
of
Precision

Technology
of
Stealth



1950s

1960s

1970s

1980s

1990s

2000+

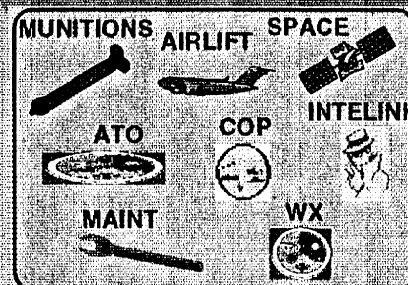
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C2 Vision

**Global,
Integrated,
Interoperable,
Affordable,
Protected**

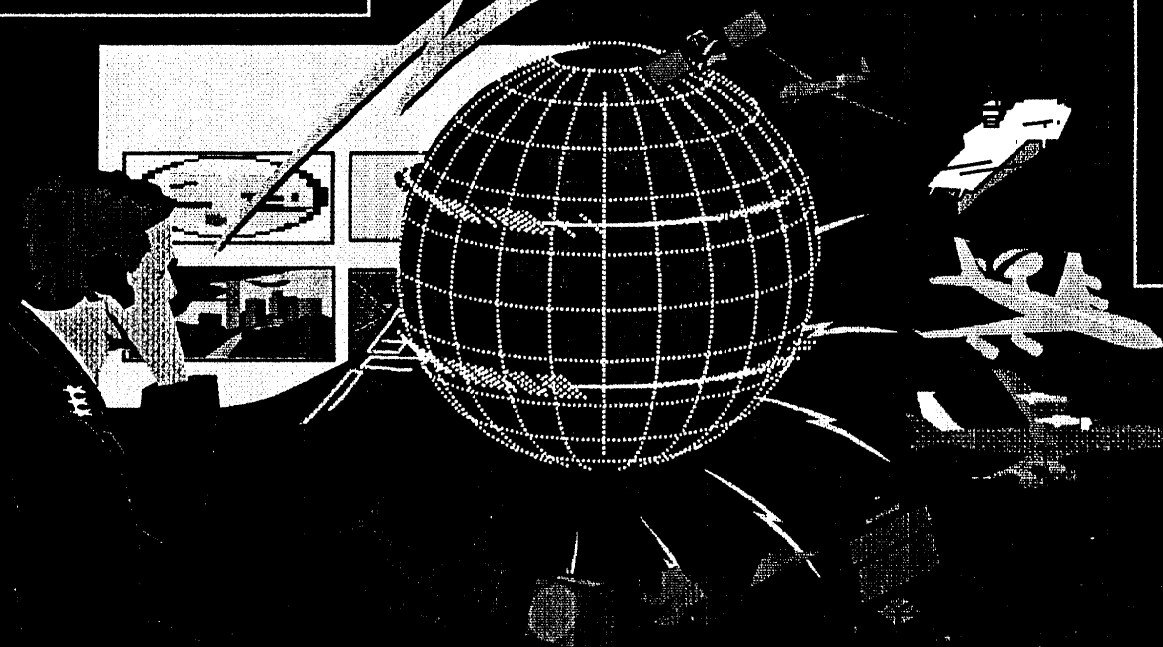
Global Command & Control



System (GCCS)

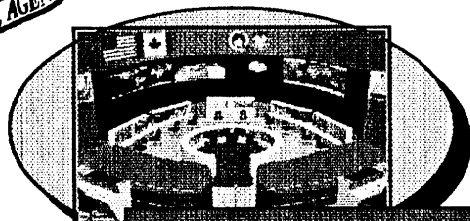
Protected

**Common
Terminals
&
Applications**

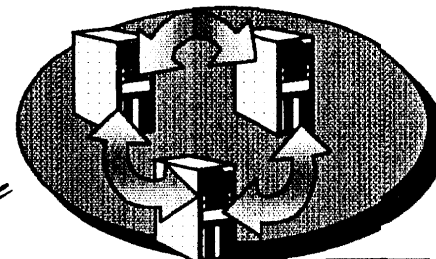


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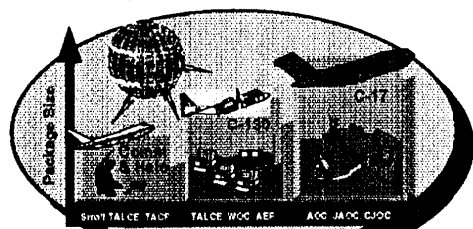
Focus Areas



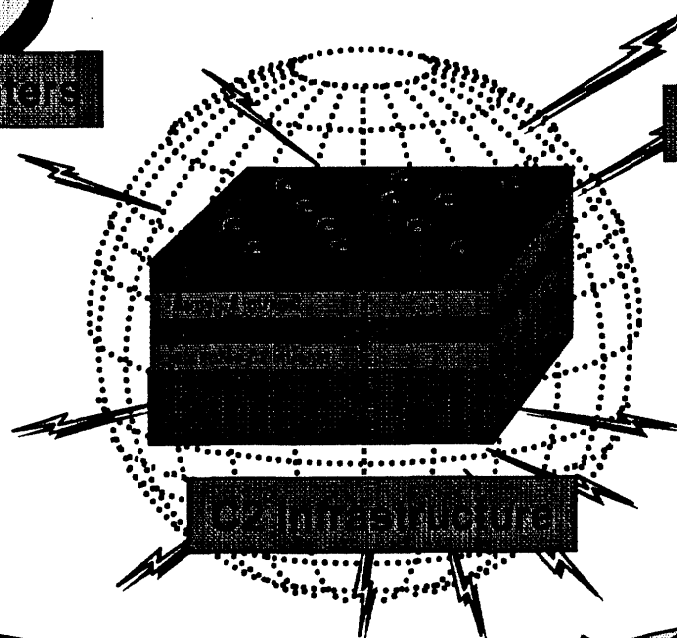
Fixed C2 Centers



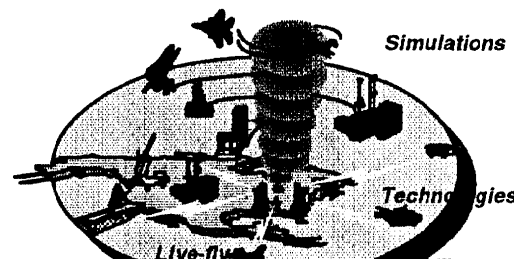
Common Databases



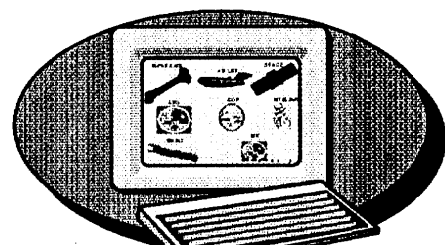
Followed C2 Centers



C2 Hub



Experimentation



C2 Applications



Future Development

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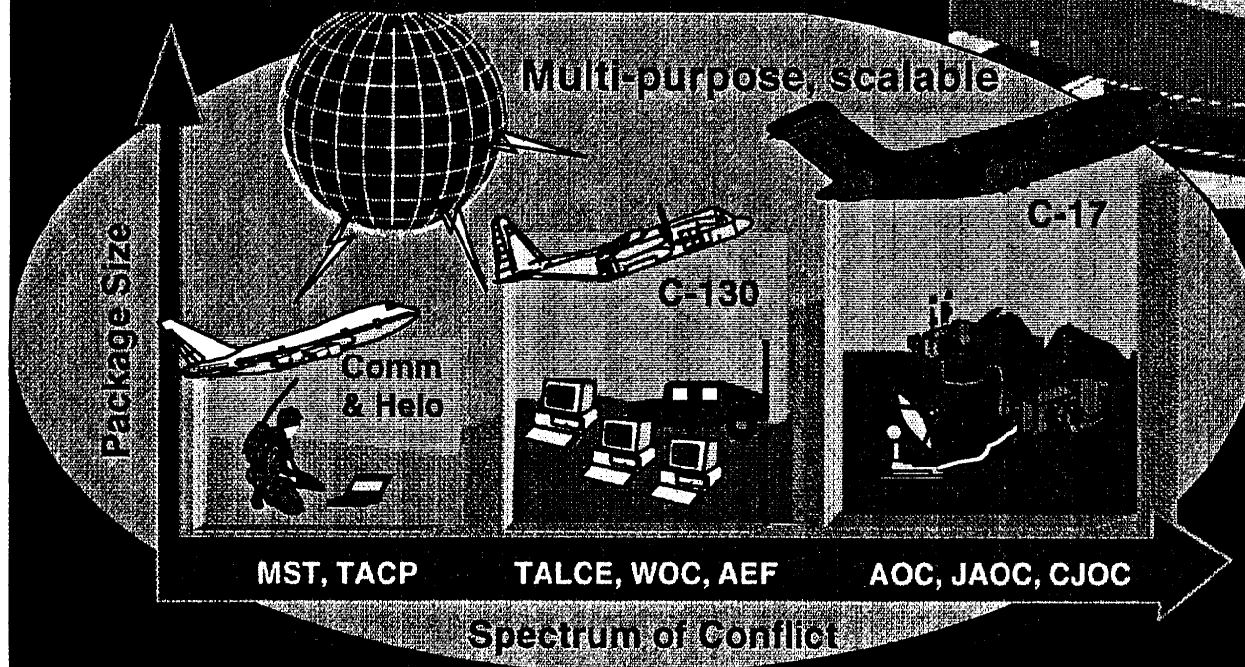


C2 Centers -- Migrate & Consolidate

Deployed C2 Centers



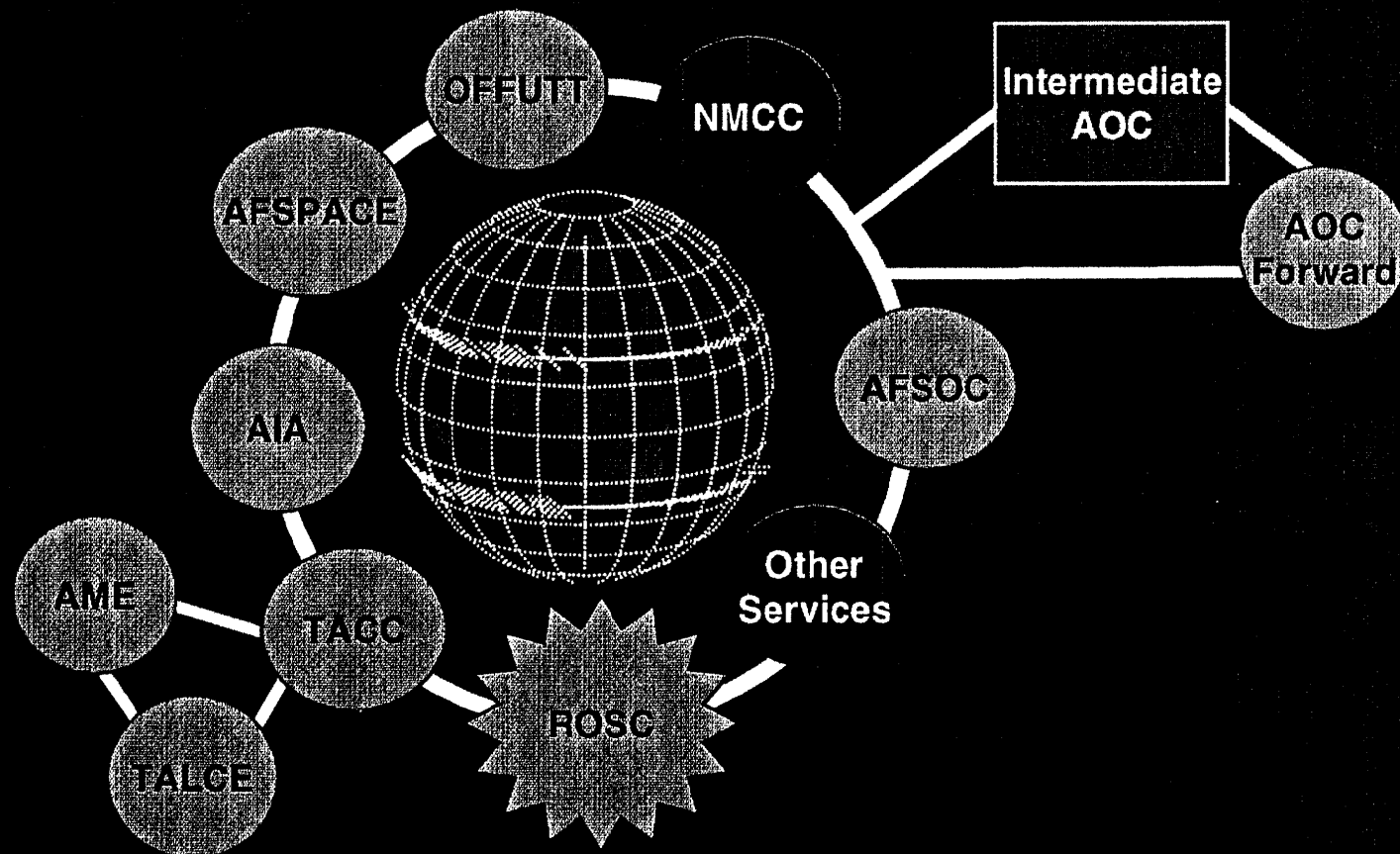
Fixed C2 Centers



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Implementing Reachback CONOPs



Experiments, exercises, and battlelab initiatives will:

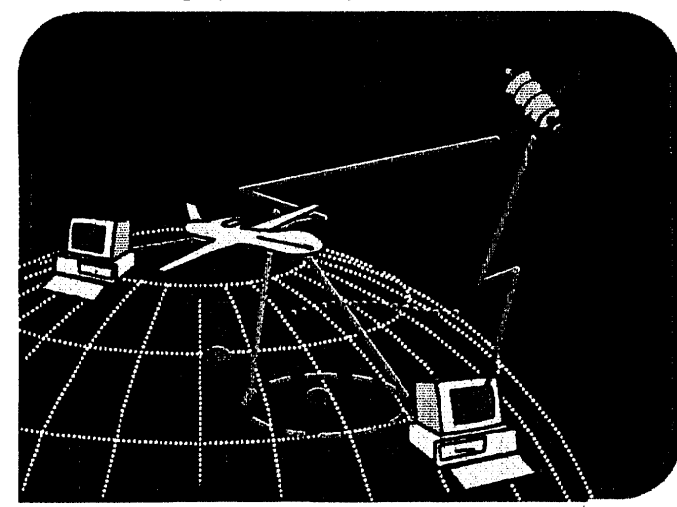
- Mature peacetime and contingency ops
- Refine the people - process - technologies

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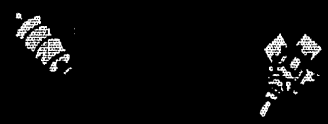
Common Operational Picture

Common View



(Integrated Display)

Space



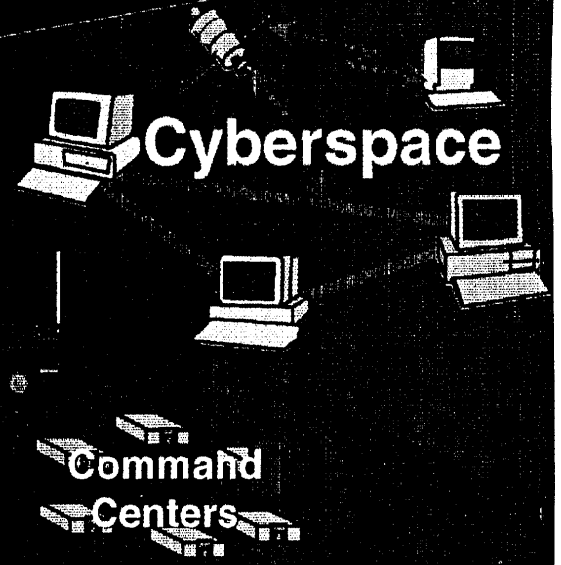
Air



Surface



Cyberspace



Command Centers

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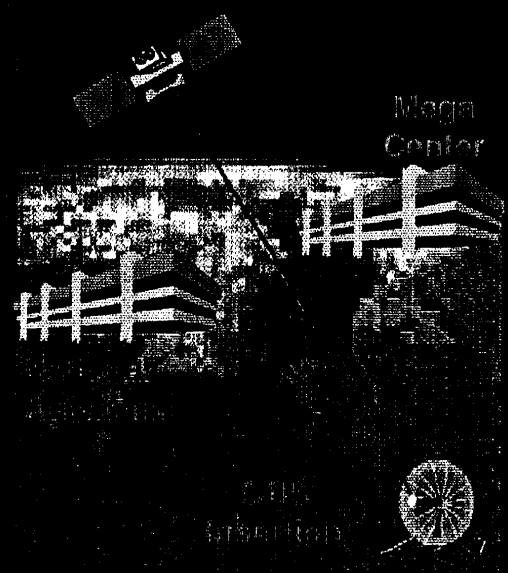


Infrastructure

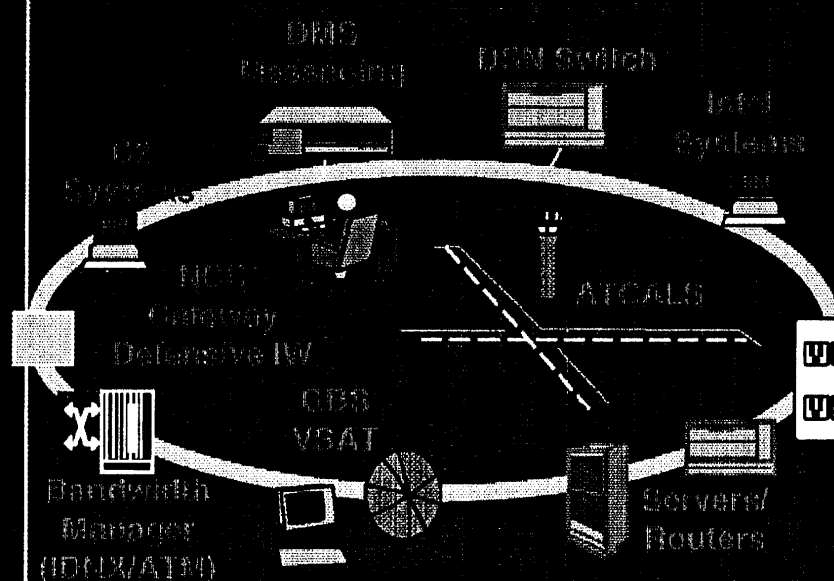


One Network, One Fight

Outside The Gate (DII) *"Smart Push"*



Inside The Gate (BII) *"Plug and Play"*



Last 400 Feet *"Warrior Pull"*

- Appliances
- Workstations
- PCs, Fax's
- VTC Suites
- Phones
- Information Access
- User Applications
- Customer Service

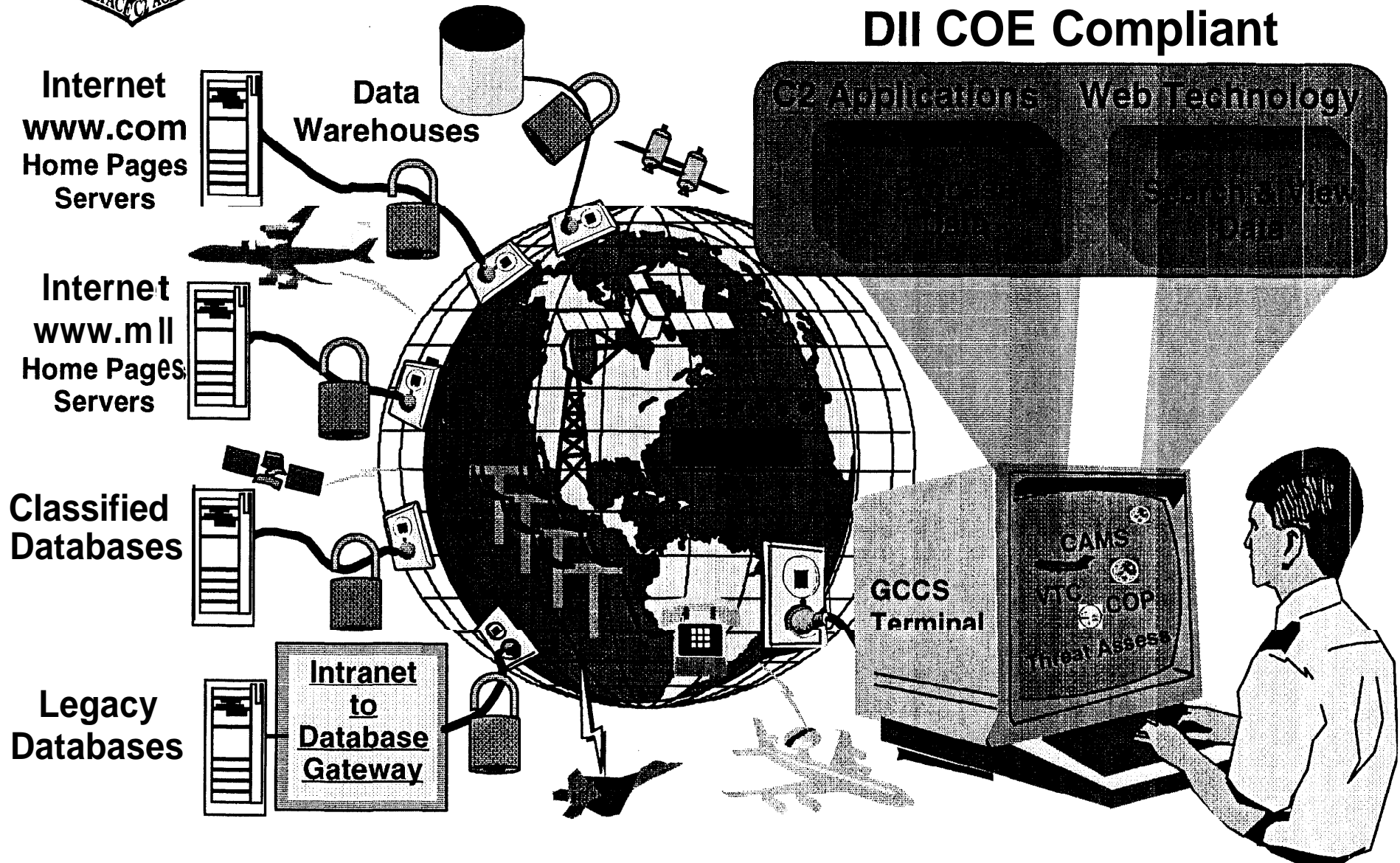
Defense Information Infrastructure

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Air Force "C2 Weapon System"

DII COE Compliant



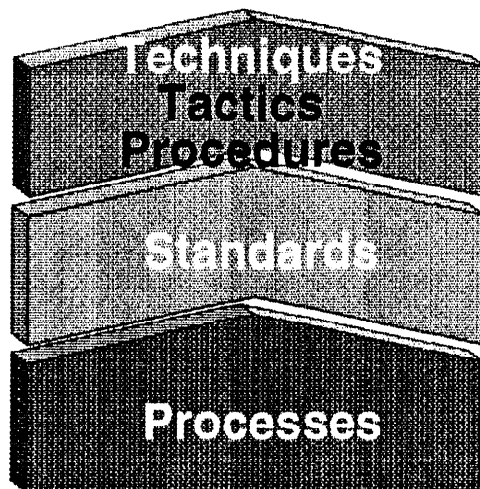


DoD INFORMATION INFRASTRUCTURE PROTECTION

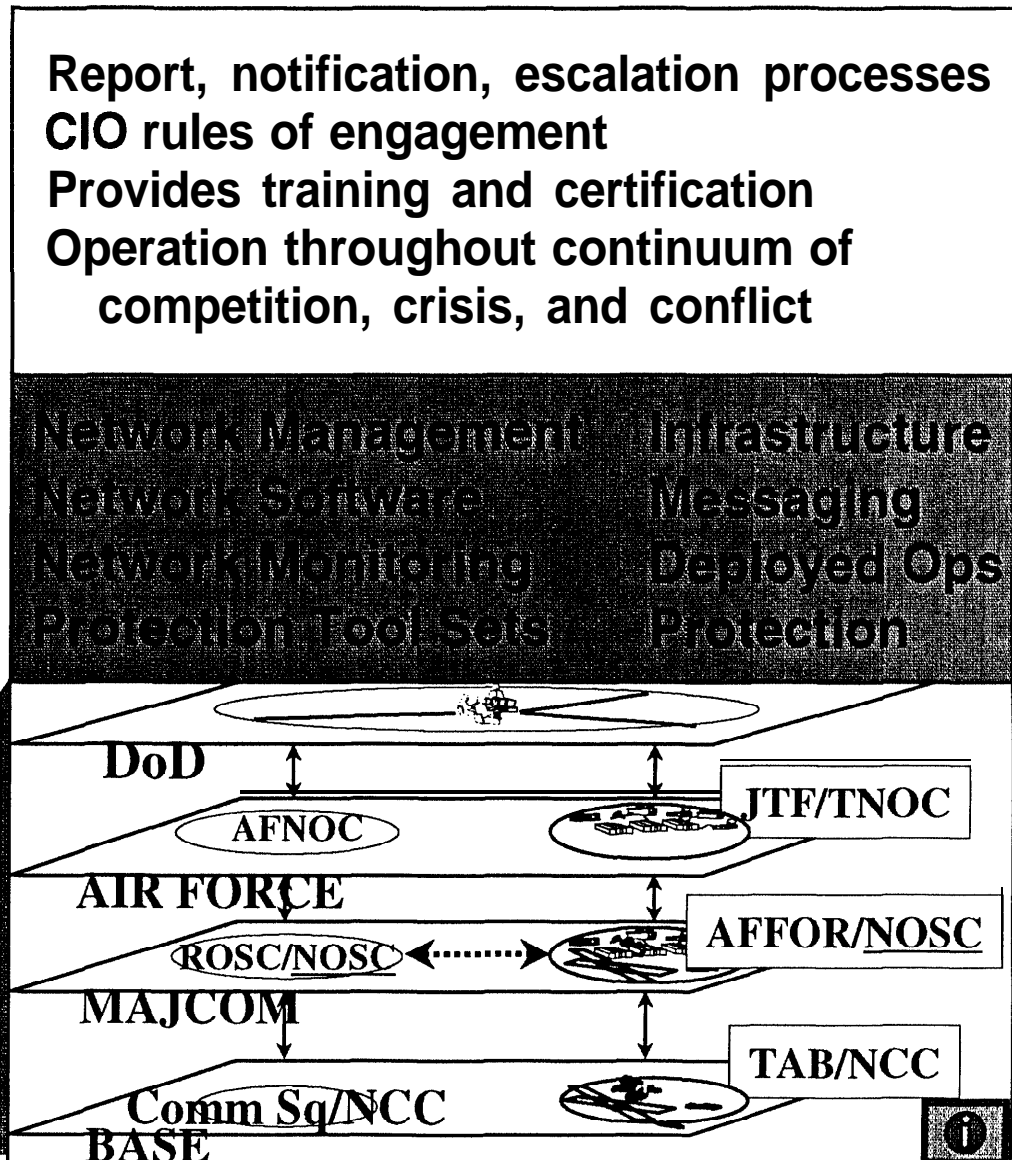
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"Outside the Gate"

3-Tier Approach



C2 Systems



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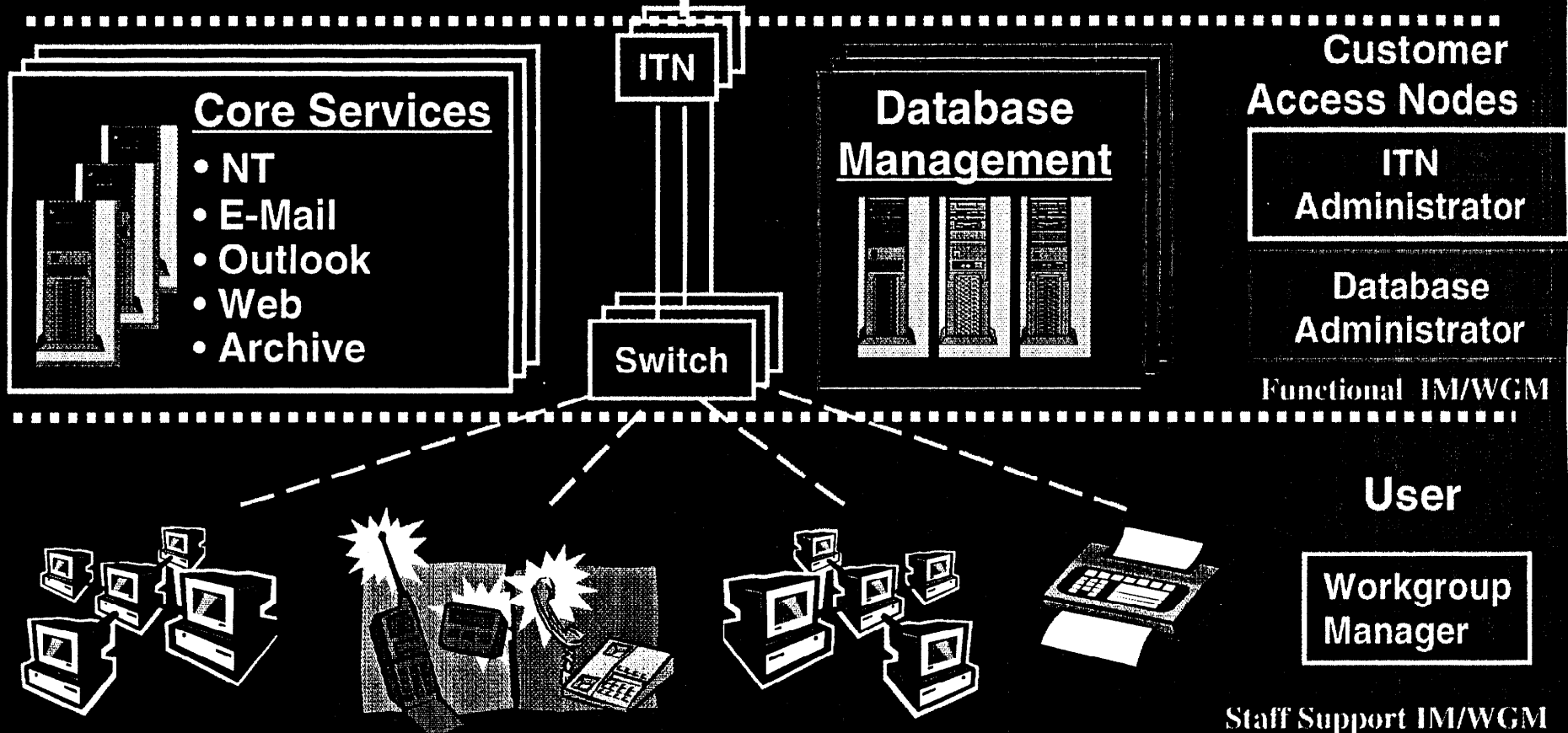


NETWORK THREE-TIER MODEL "Inside the Gate"

Network Management
Base Information Protection

NCC

Network
Manager





DEFENSE IN DEPTH

Network Control Center

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NCC

Network
Manager

Network Management
Base Information Protection

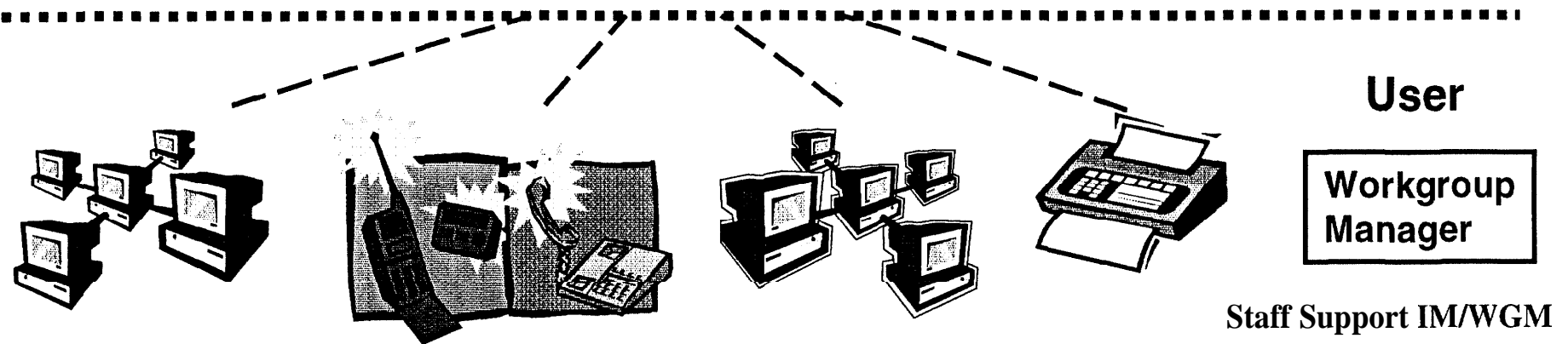
-
- Standard Hardware
 - Trusted Applications
 - Configuration Control
 - Central Dial-In & Remote Access
 - Access Control
 - Firewall Protection
 - Network Monitoring
 - Recovery and Restoral
 - Intrusion Detection
 - Protection Tool Sets
 - System Patches
 - Encryption
 - Dynamic Assessment and Reporting
 - Network Profiling
 - Virus Protection
 - 24x7 Assistance and Engineering
 - Physical Protection



DEFENSE IN DEPTH

Last 400' - Desktop

- Virus Protection
- User-id and Password
- Physical Security
- Secured File Sharing
- User Reporting
- TEMPEST
- Encryption
- Standard Desktop Software
- Standard Hardware Configuration



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The Roadmap: Investment Focus Areas

Global
Integrated
Interoperable
Affordable



Common
Terminals
& Applications

Protected

Spiral Development

Education and Training

Applications/Displays

Common Databases/Standards

Demos and Experiments

C2 Centers

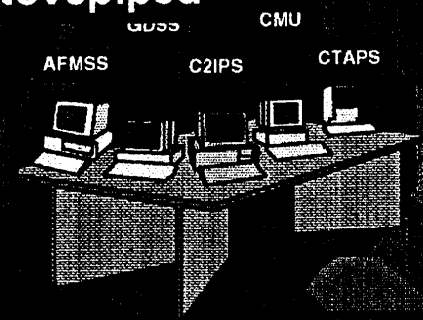
C2

Infrastructure

C2 Warrior Program

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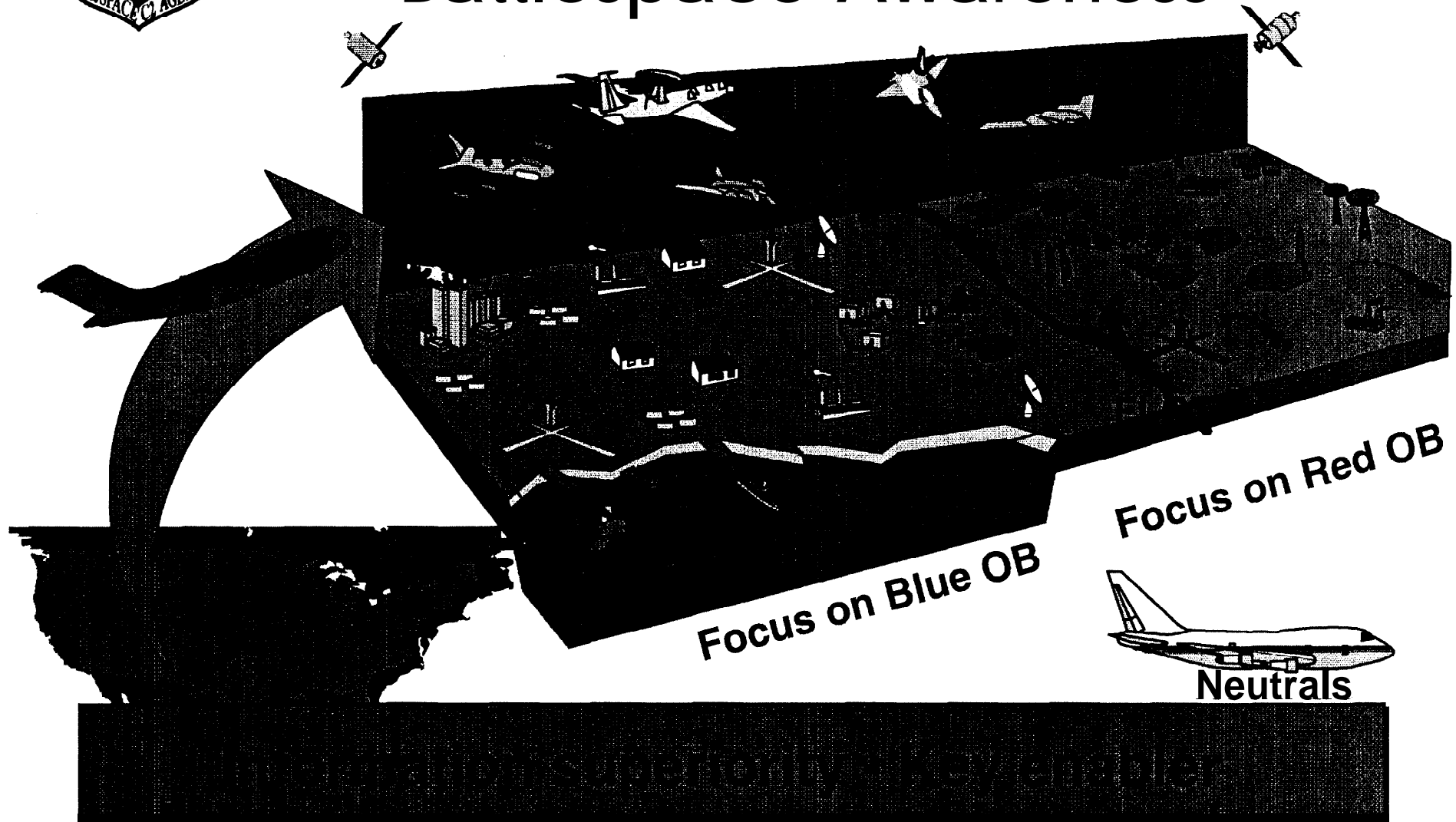
Federated
&
Stovepiped



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Tomorrow's Dominant Battlespace Awareness





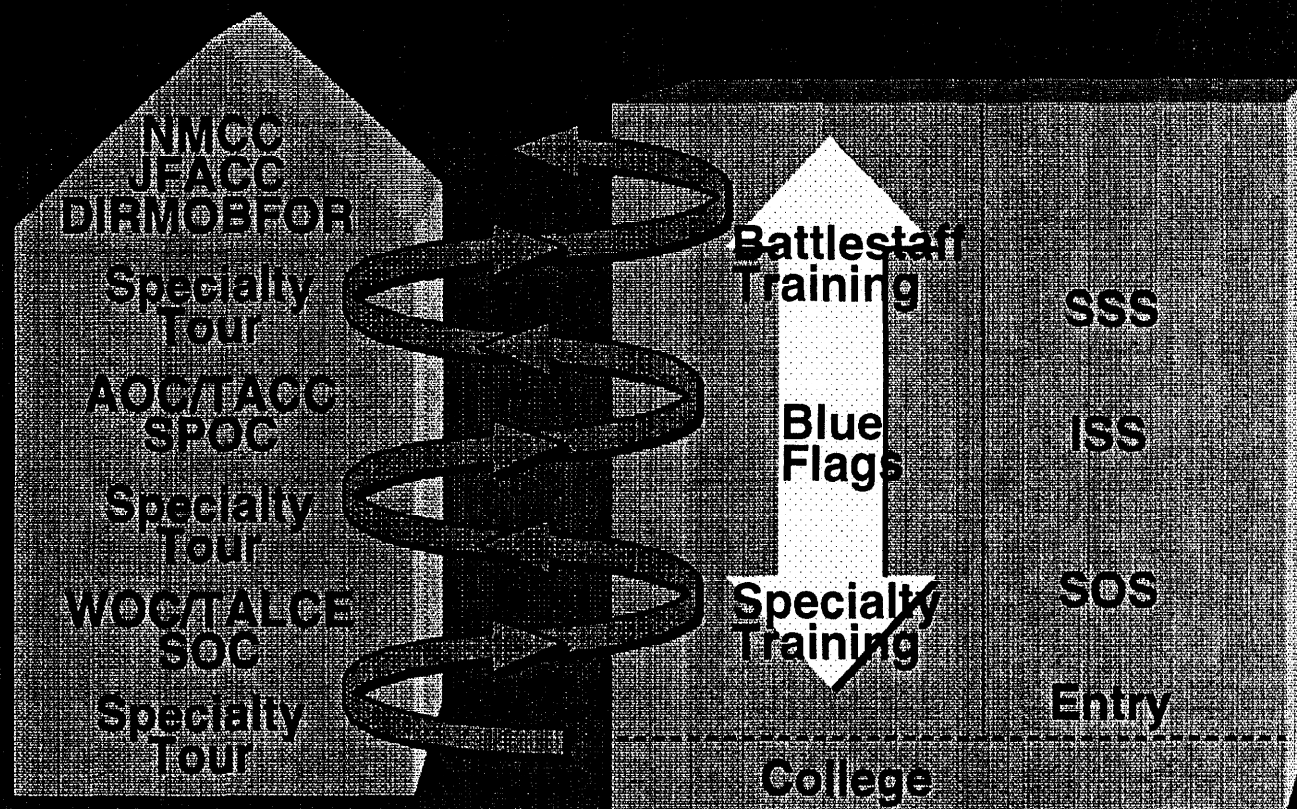
Force Development

Provide C2 professionals educated, trained, experienced, and certified in the operational doctrine and individual basic skills; along with a comprehensive, coherent and integrated career development path, to air and space commanders.

- **Comprehensive C2 education & training curriculum**
- **“Enroute” qualification training**
- **Certify**
- **Develop “plug & play” on-line training**
- **Enhance distributed “Wargaming”**



C2 Warrior: Career Path



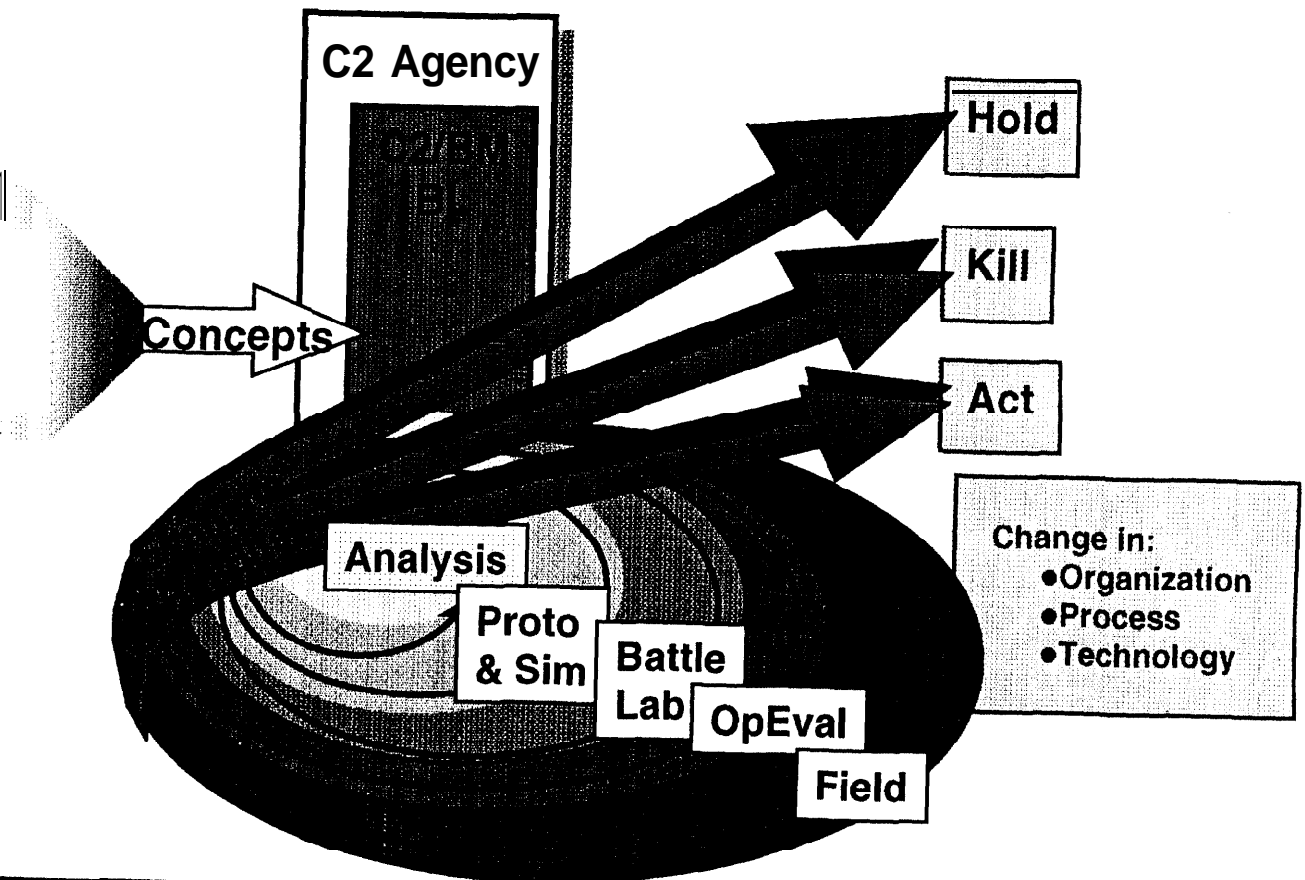
Goal: Provide Air & Space CCs certified C2 professionals

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C2 Innovation: Spiral Development

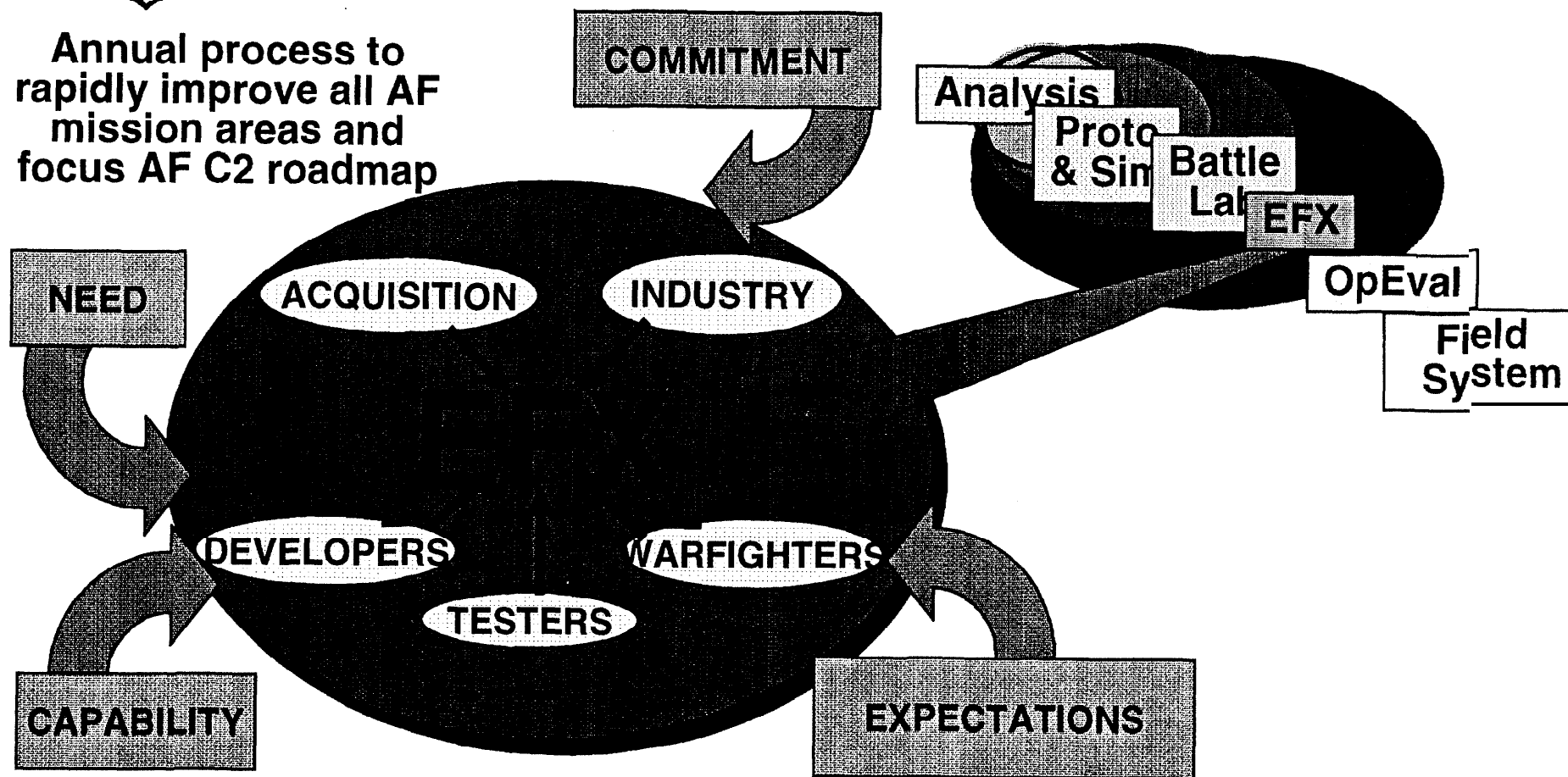
- JV 2010
 - Global Engagement
 - LRP a Vision
- Deficiencies
- I - - - & G & -
- Ideas





EFX Process

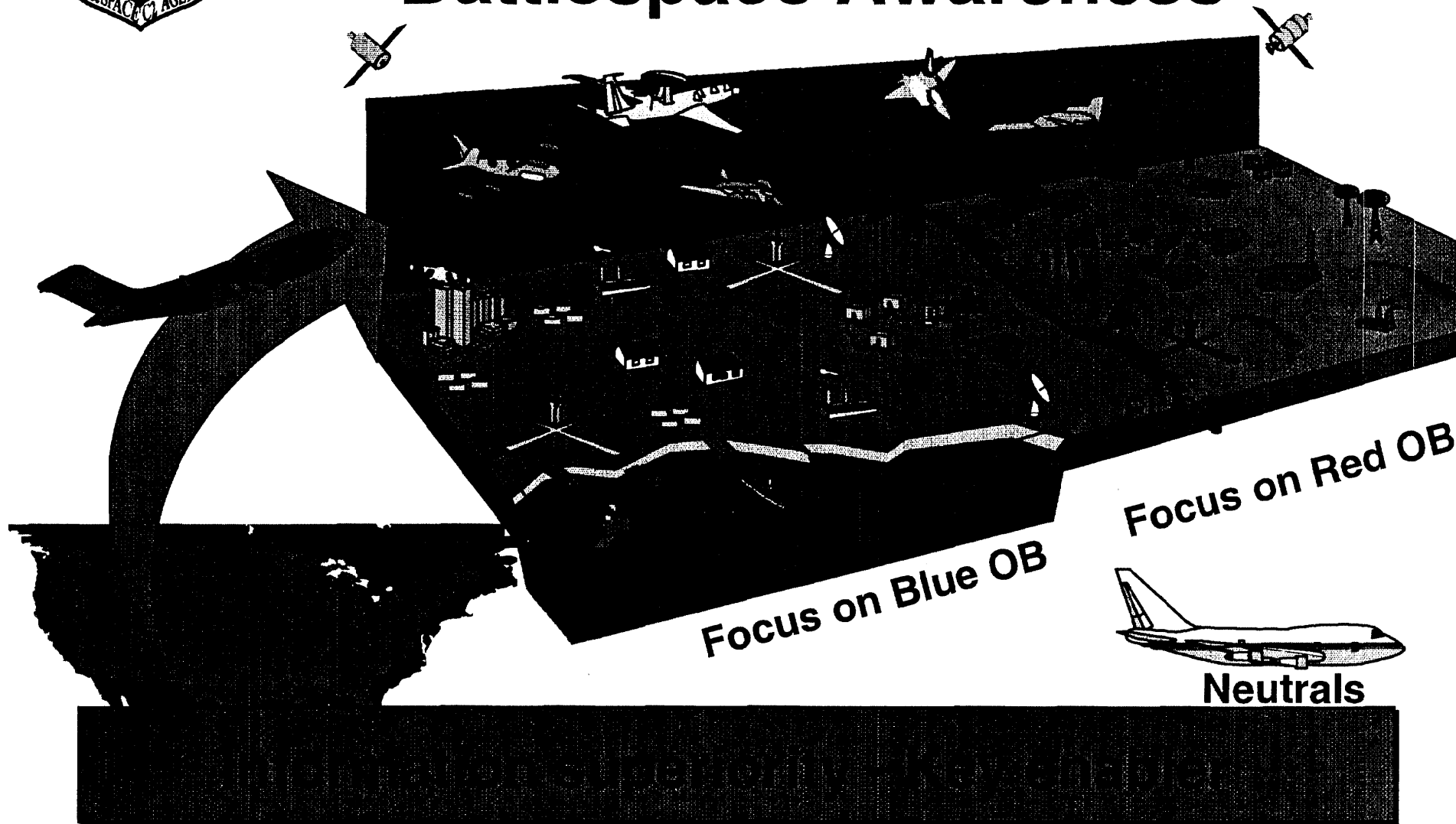
Annual process to rapidly improve all AF mission areas and focus AF C2 roadmap



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Tomorrow's Dominant Battlespace Awareness



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The Roadmap: Investment Focus Areas

Global
Integrated
Interoperable
Affordable



Common
Terminals
& Applications

Protected

Spiral Development

Education and Training

Applications/Displays

Common Databases/Standards

Demos and Experiments

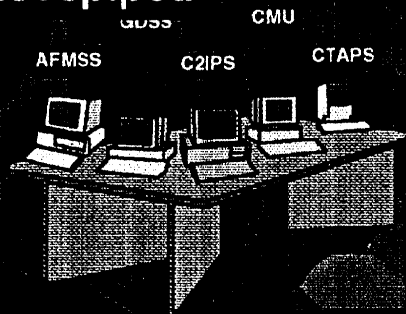
Centers

Infrastructure

C2

C2 Warrior Program

Federated
&
Stovepiped



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